PCT

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :		(11) International Publication Number: **WO 96/36253**
A47B 25/00, A63F 9/24, G09F 3/02	**A1**	(43) International Publication Date: 21 November 1996 (21.11.96)

(21) International Application Number: PCT/US96/07024	(81) Designated States: AU, JP, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).
(22) International Filing Date: 15 May 1996 (15.05.96)	
(30) Priority Data: 08/444,566 19 May 1995 (19.05.95) US	**Published** *With international search report.*
(71)(72) Applicant and Inventor: FRENCH, John [US/US]; 2113 Via Aguila, San Clemente, CA 92672 (US).	
(72) Inventor: PIEHL, William; 2113 Via Aguila, San Clemente, CA 92672 (US).	
(74) Agent: STOUT, Donald, E.; 910 Calle Negocio #280, San Clemente, CA 92673-6201 (US).	

(54) Title: GAMING TABLE, TRACKING SYSTEM AND METHOD
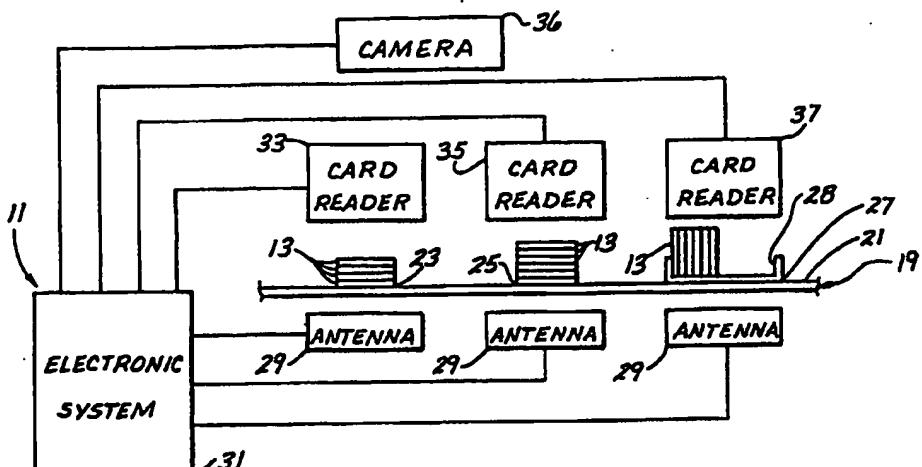
(57) Abstract

A method of tracking movement of gaming chips (13) in casino comprising electronically identifying gaming chips on a first gaming chip placement area (23, 25, 27) within the casino, moving a first of the gaming chips to a second gaming chip placement area (23, 25, 27) and electronically identifying the first gaming chip on the second gaming chip placement area so that the location of the first gaming chip is tracked. The gaming chip placement areas may be at various places such as on a gaming table (19) or a gaming chip tray (28).

GAMING TABLE, TRACKING SYSTEM AND METHOD

Background of the Invention

Casinos have been subject to a variety of devious unlawful schemes pursuant to which the perpetrators attempt to fraudulently obtain money or credits from the
5 casino. In one such scheme, a blackjack dealer may arrange with a co-conspirator to allow the co-conspirator to "win" large amounts from the house. Individual players have also devised unlawful schemes enabling them to "win" at various gaming tables including blackjack and craps.
10 As a consequence, casinos expend considerable time and effort in observing both players and game operators in an effort to make certain that all of the games are fairly played.

It is known to embed a radio frequency
15 transponder in a gaming chip, and one such construction is shown in Rendleman et al U.S. Patent No. 5,166,502. The transponder can be tagged with information concerning the chip, such as the chip identity and value. According to this patent, a reading device can be placed in a slot
20 machine to prevent the use of counterfeit gaming chips in the slot machine. However, this does not address the many schemes that have been devised to cheat the house on the gaming tables.

It is also known to employ machine readable
25 identification cards for players of slot machines. This enables a computer to track various information about the player of the slot machine such as that player's win-loss record against the slot machine, the total dollar amount played, the number of times that player played the slot

2

machines, the amount paid out to the player and the number
of hours played. This information can then be used to
award complimentary features known "comps" or credits to
the player.

5   Attempts have also been made to manually track
various information about players at the gaming tables.
For example, it is common to attempt to observe various
matters such as the amount of the player's buy in, the
time played, the average bet of the player and players

10 win-loss record. However, tracking this information
manually is difficult, time consuming and often
inaccurate.

Summary of the Invention
           This invention solves this problem by providing

15 an apparatus and method which can be used, among other
things, to track the location of gaming chips throughout
the individual games and the casino. As a consequence,
the manpower needed to oversee casino personnel and
monitor players is reduced and the opportunities for

20 apprehending an offender are enhanced. This invention
also enables the rapid and accurate gathering of
considerable information about the gaming activity of each
player at the gaming tables, and this can be used for
various purposes including the awarding of comps.

25   This invention is adapted for use with
electronically identifiable gaming chips which have been
tagged with various information such as an individual
identification number which identifies that particular
chip and the value of the chip. The movement of the chip

30 can be tracked by electronically identifying the gaming
chip at a first gaming chip placement area within the
casino. When the gaming chip is moved to second gaming
chip placement area within the casino, that chip is again
electronically identified as being on the second gaming

chip placement area. Consequently, the location of the gaming chip is tracked.

The gaming chip placement areas may be at any of a variety of locations within the casino including on one 5 or more gaming tables, on a gaming chip tray, in the cashier's cage, and in the vault where the chips are stored. The information obtained from the gaming chips, including the present location of the gaming chips, can be stored in a memory.

10   Another feature of this invention is that all of the gaming chips on a gaming chip placement area can be electronically identified while all of such chips are on that gaming chip placement area. This feature helps adapt this apparatus and method for use with games played on the 15 gaming tables where it is common to place more than one of the chips on a chip placement area as when the player is betting multiple chips or is being paid by the dealer with multiple chips. Consequently, with this invention it is possible to electronically identify each gaming chip of a 20 group of electronically identifiable gaming chips at first gaming chip placement area within the casino, move one or more of such gaming chips to a second gaming chip placement area and electronically identify the gaming chips at the second gaming chip placement area to thereby 25 track the gaming chips.

In addition to preventing the use of counterfeit chips at the gaming tables and being able to disqualify any stolen chips at the gaming tables, the ability to track and identify each of the gaming chips provides many 30 other advantages. For example, the win-loss record of each dealer can be automatically ascertained, and by having players identify themselves with player cards, the win-loss record of each dealer versus each player can also be tracked. Consequently, it becomes more difficult for

4

the dealer to conspire with a particular player in an effort to cheat the house.

This invention provides a gaming table having a game playing surface with such surface having indicia
5   which adapts the surface for a game which uses gaming chips. The surface has at least one gaming chip placement area. The gaming table also includes an antenna for obtaining information from a gaming chip located on the gaming chip placement area. The antenna preferably has a
10 capability for obtaining information from each of a plurality of gaming chips located on the gaming chip placement area. This enables the gaming table and the associated system to accommodate the placement of multiple gaming chips on the gaming chip placement area.
15   The antenna can be positioned at any suitable location where it can carry out its information gathering function from the gaming chips, i.e. the antenna and gaming chip placement area are located so that the gaming chips at the gaming chip placement area are within the
20 interrogation range of the antenna. In this regard, the antenna is preferably carried by the gaming table closely adjacent the gaming chip placement area. In a preferred construction, the antenna is carried by the gaming table beneath the gaming chip placement area.
25   The gaming table may have one or more of the gaming chip placement areas. For many of the games, it is preferred that the surface of the gaming table have a plurality of the gaming chip placement areas. In this event, there are preferably a corresponding number of the
30 antennas for obtaining information from a gaming chip located on the associated gaming chip placement area.

The gaming table may be adapted for any of a variety of games which utilize gaming chips, such as blackjack, craps, poker, big six, red dog, sic bo, Pai
35 Gow, roulette and baccarat. In the case of blackjack with

5

n player positions, there may be a first group of the
gaming chip placement areas which constitute n player bet
placement areas and a second group of the gaming chip
placement areas which constitute n player-win placement
5   areas. With this arrangement, information from the gaming
chips being bet and the gaming chips being paid to a
player can obtained. In the case of craps, one of the
gaming chip placement areas may be a gaming chip storage
area so that the information from the gaming chips held at
10 the gaming chip storage area can be obtained.

        The gaming table may be used in an apparatus or
system which includes various other components. For
example, there may be a chip tray on the gaming table and
one   or   more   antennas   for   electronically   obtaining
15 information from the gaming chips which are located in the
.chip tray. Preferably this antenna is carried by the chip
tray.

        Viewed from another perspective, the system of
this invention may include first and second gaming chip
20 placement surface regions on which gaming chips can be
placed and associated first and second antennas. At least
one of the gaming chip placement surface regions is on a
gaming table. The system also includes an electronic
system for receiving and storing the information from the
25 antennas so that the location of the gaming chips can be
tracked.

        Another feature of the method of this invention
is electronically identifying the value of gaming chips
which have electronically identifiable values and which
30 are at a first gaming chip placement area of a gaming
table over a period of time. The values of the gaming
chips at the first gaming chip placement area during such
period of time are summed to provide a summed value, and
this can be automatically accomplished.

6

There are several instances in which knowing the summed value is desirable. For example, the first gaming chip placement area may be a player's bet placement area, and the method may also include identifying the player who
5 placed the gaming chips at the player's bet placement area during the applicable period of time. This enables the house to know the betting activity of the player, and this is important so that the house can award comps to the player. Although player identification can be
10 accomplished in different ways, preferably it is carried out with a machine readable card associated with the player. Cards of this type are known and have been used for player identification for slot machines.

The summed value is also of interest in compiling
15 the game operator's win-loss record against a particular player. This feature of the invention calls for identifying the game operator associated with the gaming table during the applicable period of time. Game operator identification can be ascertained such as by utilizing a
20 machine readable card associated with the game operator.

The first gaming placement area may also be a chips for cash area. In this event, the method may also include identifying the game operator during the
25 applicable period of time and comparing the cash received for gaming chips by the game operator and the summed value to provide a check on the game operator's handling of the gaming chips and money.

Another feature of this invention is to provide
30 a camera for viewing a particular gaming table or tables and to actuate the camera in response to predetermined activity which would suggest that surveillance is advisable. For example, this activity may be the placing a bet in the player's bet placement area greater than a
35 predetermined amount, increasing a bet from one game to

7

the next by more than a predetermined amount or any other
factor that the house may consider would justify
surveillance. In each of these cases, the antenna
associated with the player's bet placement area would
5 provide a particular signal indicative of the activity
that should be observed and the camera would be
appropriately actuated in response to such signal. Thus,
in monitoring the value of gaming chips at a gaming chip
placement area, particular information may be obtained
10 which results in camera actuation.

The invention, together with additional features
and advantages thereof may best be understood by reference
to the following description taken in connection with the
accompanying illustrative drawings.

15 **Brief Description of the Drawings**

Fig. 1 is a schematic illustration of a system
constructed in accordance with the teachings of this
invention.

Fig. 2 is a somewhat schematic perspective
20 illustration of a chip of the type usable with this
invention.

Fig. 3 is a schematic plan view of a blackjack
table constructed in accordance with the teachings of this
invention.

25 Fig. 4 is an enlarged fragmentary sectional view
taken generally along line 4-4 of Fig. 3.

Fig. 5 is a perspective view of a chip tray
constructed in accordance with the teachings of this
invention.

30 Fig. 6 is a fragmentary plan view of a craps
table constructed in accordance with the teachings of this
invention.

8

Description of the Preferred Embodiments

Fig. 1 shows a system 11 for tracking movement of gaming chips 13 and for performing other valuable functions. The gaming chips 13 which are adapted for use
5   with the present invention are electronically identifiable and carry electronically ascertainable information about the gaming chip. Generally, each of the gaming chips 13 (Fig. 2) includes a body 15 and an electronic tag or transponder 17 within and carried by the body. The tag 17
10   carries electronically ascertainable information about the chips such as the chip's identification number and the value of the chip in the casino. Each of the gaming chips 13 has its own identification number and so in that sense is unique. The tag 17 includes an electronic circuit
15   which includes an electronic chip and an antenna. The tag 17 may also include a battery, which when activated would provide energy for transmitting a signal from the tag. When the tag 17 is interrogated by an appropriate signal from an antenna, it responds by sending a signal
20   representative of the information stored in the circuit. Tags of this type and the associated equipment needed to obtain the information from the tags are known and are available, for example, from Telsor of Englewood, Colorado.
25   However, the preferred tag 17 is of the type which permits batch scanning, i.e. scanning a whole group of the gaming chips 13 during one time interval with a radio beam. This beam illuminates all of the tags 17 and requires them to broadcast the electronically
30   ascertainable information carried thereby. The radio beam provides energy to the tag or transponder 17, thereby enabling the tags to broadcast this information. This technology is available, for example, from British Technology Group, Ltd. of London as Supertag and from
35   Advanced Systems Group International of Herndon, VA.

The system 11 includes a gaming table 19 (Fig. 1) having a surface 21 and gaming chips placement areas 23, 25 and 27. The gaming table 19 may be of any kind including the gaming tables referred to above. Any

5 desired number of the gaming chip placement areas may be utilized, and the three illustrated in Fig. 1 are purely illustrative. The gaming chip areas 23, 25 and 27 may be at various different locations within the casino, such as on a gaming table, on a gaming chip tray, in the cashier's

10 cage, in the casino vault, etc. In the example shown in Fig. 1, the gaming chip areas 23 and 25 are on the surface 21 of the gaming table 19 and the gaming chip placement area 27 is on a dealer's chip tray 28.

The system 11 also includes a plurality of

15 antennas 29, one for each of the gaming chip areas 23, 25 and 27. The antennas 29 are cooperable with the tags 17 in the gaming chips 13 for obtaining information stored in the tags of the gaming chips at the associated gaming chip placement area. The antenna 29 transmits a radio beam

20 which, in effect, scans the tags 17 of the chips 13 on the associated gaming chip placement area and requires the tags to broadcast the information stored in the tags. The antennas 29 also provide the tags 17 with the energy to accomplish this. The British Technology tag and system

25 referred to above employ a protocol which prevents reader jamming that would tend to occur if a plurality of the tags 17 responded simultaneously to the command from the associated antenna. Consequently, each gaming chip 13 of the stack of gaming chips at, for example, the gaming chip

30 placement area 23 can then be identified while all of such gaming chips are at such gaming chip placement area. A batch reading system such as this is preferred. However, single tag readers could be employed for games in which only a single gaming chip is placed on a gaming chip

35 placement area.

10

The system 11 also includes an electronic system 31 which provides all of the other known functions to enable the antennas 29 to scan the tag 17 at the gaming chips 13 at the associated gaming chip placement area and

5   to receive, process and store the information so obtained. The electronic system 31 is coupled to the antennas 29 and the location of each of the chips 13 when they are at the gaming chip placement areas 23, 25 and 27 is stored in the electronic system 31. Of course the electronic system 31

10   can be coupled to any number of antennas 29 which may be located at various different locations throughout the casino including at many gaming tables.

The electronic system 31 is also coupled to conventional card readers 33 placed in association with

15   the gaming chip placement areas 23, 25 and 27, respectively.   By inserting a machine readable identification card into one of the card readers 33, a signal is transmitted to the electronic system 31 identifying the person that is using the associated gaming

20   chip placement area. For example, if a player inserts his card into the card reader 33, the system 11 knows the particular player utilizing the gaming chip placement area 23.   If, for example, a game operator inserts his card into the card reader 35, the system 11 knows that it is

25   that particular game operator who is responsible for the gaming chip placement area 25.

The electronic system 31 in addition to providing the necessary interface and reader functions common to the antenna-tag systems, also includes a computer for

30   performing the various other data processing and related functions that are required. As such, the computer may be programmed in part in a manner similar to the computers now used for tracking various information as to slot machine playing activity referred to above.

11

The system 11 shown schematically in Fig. 1 can be used to provide a number of valuable functions in a casino. For example, the system 11 can be used to track the movement of gaming chips. This can be accomplished by
5   electronically identifying each gaming chip 13 at, for example, the gaming chip area 23 so that the electronic system 31 knows specifically which chips are at the gaming area 23. If one or more of the those chips should be moved to another gaming chip placement area, such as the
10   area 25, that chip can then be electronically identified utilizing the associated antenna 29. Consequently, the movement of the gaming chips from the area 23 to the area 25 as well as to other gaming chip areas within the casino can be accomplished.

15   The system 11 .can also be used to identify the value of the gaming chips 13 which are at each of the gaming chip placement areas 23, 25 and 27. The electronic system 31 has a processor which sums the values of the gaming chips at each of these gaming chip placement areas
20   during a given time period. Consequently, if the gaming chip placement area 23 is a player's bet placement area, the total value of chips played by a player identified by the associated card reader 33 over a given time period can be ascertained. In addition, by identifying the game
25   operator associated with the game table 27 utilizing, for example, the card reader 37 and the game operator's identification card, the electronic system 31 can compile and store the game operator's win-loss record and average bet as well as the game operator's win-loss record against
30   each of the player's at the game table 19.

The system 11 may also include a camera 36 coupled to the electronic system 31. The electronic system 31 will turn the camera on in response to a particular signal or information obtained from any one or
35   more of the antennas 29. For example, the camera 36 may

12

be activated by the electronic system 31 in response to a
signal from the antenna 29 indicating that the gaming chip
placement area 23 has more than a predetermined value of
chips.   The camera 36 will be trained on at least the
5 gaming table 19 or the portion of the gaming table which
gave rise to the signal which called for surveillance.

Fig. 3 shows a gaming table 19a in the form of a
blackjack table. The blackjack table 19a can be used in
the system of Fig. 1 in place of the schematically
10 illustrated gaming table 19 and many portions of the
blackjack table 19a corresponding to portions of the
gaming table 19 are designated by corresponding reference
numerals followed by the letter "a". The blackjack table
19a may be of a conventional generally semicircular
15 configuration in plan and its upper surface 21a may have
indicia 38 that adapts the surface 21a for playing
blackjack. The indicia 38 may provide, for example, a
variety of gaming chip placement areas including player
bet placement areas 39 and player win placement areas 41
20 for players P. The areas 39 and 41 are arranged in pairs
with one pair being provided for each playing station, and
seven such playing stations are shown in Fig. 3. Also
associated with each player station is a card reader 33
which may, if desired, be mounted on the table 19a.

25 The table 19a also has a game operator or dealer
station and a card reader 35a at the dealer station for
identification of a dealer D. The indicia 38 on the
surface 21a also provide a gaming chip placement area in
the form of chips for cash area 43. The chip tray 28
30 containing gaming chips 13 is also provided at the dealer
station. The table 19a may also include a plurality of
bet amount displays 47 associated with the player
stations, respectively, to automatically display the value
of the gaming chips placed in the player bet placement
35 areas 39.

13

The areas 39, 41 and 43 are indicated by appropriate lines or marks on the upper surface 21a of the gaming table 19a. However, in order to obtain information from gaming chips on these areas, it is necessary that one
5 antenna be provided for each of these areas and preferably positioned closely adjacent to the associated area. Fig. 4 shows a preferred construction in which the gaming table 19a comprises a horizontal top member 49 of a suitable material and having upwardly opening cavities 51 and 53
10 for receiving antennas 29a, respectively. The top member 49 is covered with a layer 55 of felt or other suitable material, and this material also covers the cavities 51 and 53 and the antennas 29a. The indicia 38 which define the gaming chip placement areas 39 and 41 is provided on
15 the felt. A similar construction can be employed for the placement of an antenna in the top member 29 beneath the layer 55 at the chips for cash area 43.

In use, the antennas 29a for each of the areas 39, 41 and 43 and the card readers 33a and 35a are
20 suitably coupled to the electronic system 31 of Fig. 1. Consequently, the identity of each of the players and of the game operator is known as well the amount bet by each of the players on the associated bet placement area 39. The value of the current bet for an area 39 is known by
25 the system 31 and is displayed by the display 41. If desired, the winnings of the players can be tracked by summing the value of chips placed on the player win placement areas 41 and the dealers overall win-loss record can be tracked as well as the dealer's win-loss record for
30 each of the players in the game. In addition, when a player buys chips, the dealer removes chips from the chip tray 45 and places them on the chips for cash area 43 and the total value of chips placed on the chips for cash area 43 over a period of time can be summed by the electronic
35 system 31. The total value of chips placed on the area 43

14

should equal the cash received by the dealer during his
tenure at the table 19a.

The gaming chips 13 placed into and removed from
the chip tray 28 can also be monitored by placing one or
5   more of the antennas 29 in the chip tray 28 (Fig. 5). The
chip tray 28 may be conventional to the extent that it has
a series of parallel grooves 57 sized to receive and store
the gaming chips 13. The chip tray 28 departs from the
conventional in having a plurality of the antennas 29
10   within and carried by the tray. In the form shown in Fig.
5, one of the antennas 29 is provided beneath each of the
grooves 57 for detecting of the gaming chips 13 in the
associated groove. The antennas 29 of the chip tray 28
are also coupled to electronic system 31 so that the
15   identity and value, including the total value, of the
gaming chips in the tray 28 is known by the system 11.

Fig. 6 shows one way in which the system 11 can
be adapted for craps. Fig. 6 shows a craps table 19b
which can be used in the system of Fig. 1 in place of the
20   schematically illustrated gaming table 19. The craps
table 19 may be of a conventional configuration in plan
and its upper surface 21b had indicia 38b which adapts the
surface 21b for craps. In addition, the indicia 38b
defines a number of bet placement areas suitable for
25   craps. Specifically, the indicia 38b provides pass line
bet placement areas 61, don't pass bet placement areas 63,
come bet placement areas 65 and don't come bet placement
areas 67. The craps table 19b shown in Fig. 6 has a
second set of the bet placement areas 61, 63, 65 and 67
30   There are 8 sets of the bet placement areas 61, 63, 65 and
67, one for each player position at the table 19b. There
is also an antenna beneath each of the areas 61, 63, 65
and 67 and this construction may be substantially as shown
by way of example in Fig. 4.

15

The indica 38b also defines a chip storage area 69 where the chips of the house are stored and a chips for cash area 71. The area 69 is in lieu of the chip tray and the chips for cash area 71 is much like the chips for cash
5   area 43 described above in connection with Fig. 5. Thus, one or more antennas may be imbedded in the table 19b as shown by way of example in Fig. 4 beneath the areas 69 and 71 to enable identifying and determining the value of the chips in these two areas. Card readers 73 may be used to
10   read the identification cards of the players at the table 19b with one of such card readers being provided for each of the player stations. The other portions of the table 19b may be conventional for a craps table.

By utilizing the table 19b and the system 11, the
15   amount bet by each player can be determined and the total value of chips sold by the game operator is also automatically tracked. Because the chips at each of the chip placement areas on any of the gaming tables are identified, the movement of the chips from one chip
20   placement area to the next can be tracked.

Although exemplary embodiments of the invention have been shown and described, many changes, modifications and substitutions may be made by one having ordinary skill in the art without necessarily departing from the spirit
25   and scope of this invention.

16

CLAIMS

1. An apparatus comprising:
    a gaming table having a game playing surface,
said surface having indicia thereon adapting said surface
for a game which uses gaming chips;
5   said surface having at least one gaming chip
placement area therein; and
            an antenna for obtaining information from a
gaming chip located on said gaming chip placement area.

2. An apparatus as defined in claim 1 wherein
said antenna has a capability for obtaining information
from each of a plurality of gaming chips located on said
gaming chip placement area.

3. An apparatus as defined in claim 1 wherein
the antenna is carried by the gaming table closely
adjacent the gaming chip placement area.

4. An apparatus as defined in claim 1 wherein
the antenna is carried by the gaming table beneath the
gaming chip placement area.

5. An apparatus as defined in claim 1 wherein
said surface has a plurality of gaming chip placement
areas and including a plurality of antennas for obtaining
information from gaming chips located on associated gaming
5   chip placement areas.

6. An apparatus as defined in claim 5 wherein
the indicia adapts said surface for blackjack with n
player positions, a first group of said gaming chip
placement areas includes n player bet placement areas and

17

5   a second group of said gaming chip placement areas
includes n player win placement areas located adjacent the
player bet placement areas respectively, whereby
information from the gaming chips being bet and the gaming
chips being paid to a player can be obtained.

7. An apparatus as defined in claim 5 wherein
the gaming table is a craps table, a first group of said
gaming chip placement areas includes n player bet
placement areas and a first of said gaming chip placement
5   areas is gaming chip storage area whereby information from
the gaming chips being bet and the gaming chips held at
the gaming chip storage area can be obtained.

8. An apparatus as defined in claim 5 including
a chip tray on the gaming table and an antenna for
electronically obtaining information from the gaming chips
which are in the chip tray.

9. An apparatus as defined in claim 8 wherein
the last mentioned antenna is carried by the chip tray.

10. An apparatus as defined in claim 1 including
an electronic system for receiving and storing the
information from the antenna about the gaming chip.

11. An apparatus as defined in claim 1 including
a camera and means responsive to a particular signal from
the antenna for actuating the camera.

12.   A method of tracking movement of gaming
chips in a casino comprising:
electronically identifying each gaming chip of a
group of electronically identifiable gaming chips at first
5   gaming chip placement area within the casino;

18

moving a first gaming chip of said group of gaming chips to a second gaming chip placement area within the casino; and

electronically identifying said first gaming chip
10   at the second gaming chip placement area within the casino whereby the location of said first gaming chip is tracked.

13.   A method as defined in claim 12 wherein there is a second electronically identifiable gaming chip on the second gaming chip placement area and the second mentioned step of electronically identifying includes
5   electronically identifying the first and second gaming chips while both the first and second gaming chips are at the second gaming chip placement area.

14.   A method as defined in claim 12 wherein the first gaming chip placement area is on a gaming table.

15.   A method as defined in claim 12 wherein the first gaming chip placement area is on a gaming chip tray.

16.   A method as defined in claim 12 which includes storing in a memory the location of the first gaming chip.

17.   A system for tracking movement of gaming chips wherein the gaming chips carry electronically ascertainable information about the gaming chips, said system comprising:
5   first and second gaming chip placement surface regions on which gaming chips can be placed;

first and second antennas for obtaining information from gaming chips at the first and second gaming chip placement surface regions, respectively;

19

10   a gaming table, at least the first gaming chip
placement surface region being on the gaming table; and
            an electronic system for receiving and storing
the information from the first and second antennas about
the gaming chips on the first and second gaming chip
15 placement surface regions whereby the location of the
gaming chips on the first and second gaming chip placement
surface regions can be tracked.

          18. A method comprising:
          electronically monitoring the total value of
gaming chips which have electronically identifiable values
and which are at a first gaming chip placement area of a
5 gaming table over a period of time; and
          summing the values of the gaming chips at the
first gaming chip placement area during said period of
time to provide a summed value.

          19. A method as defined in claim 18 wherein the
first gaming chip placement area is a player's bet
placement area and said method includes identifying the
player who placed the gaming chips at the player's bet
5 placement area during said period of time whereby the
betting activity of such player is known.

          20. A method as defined in claim 19 wherein said
step of identifying is carried out with a machine readable
card associated with the player.

          21. A method as defined in claim 19 including
electronically monitoring the total value of gaming chips
which have electronically identifiable values and which
are at said player's win payment area, summing the values
5 of the gaming chips at the said player's win payment area
during said period of time to provide a summed value,

20

identifying the game operator associated with the gaming
table during said period of time and compiling the game
operator's win-loss record against the player.

22. A method as defined in claim 18 wherein the
first gaming chip placement area is a chips for cash area
and said method includes identifying the game operator
during said period of time and comparing the cash received
5   for gaming chips by the game operator and said summed
value.

23. A method as defined in claim 22 wherein the
said step of identifying the game operator is carried out
with a machine readable card associated with the game
operator.

24. A method as defined in claim 18 including
actuating a camera for viewing a region near the first
gaming chip area in response to particular information
obtained in said step of monitoring.
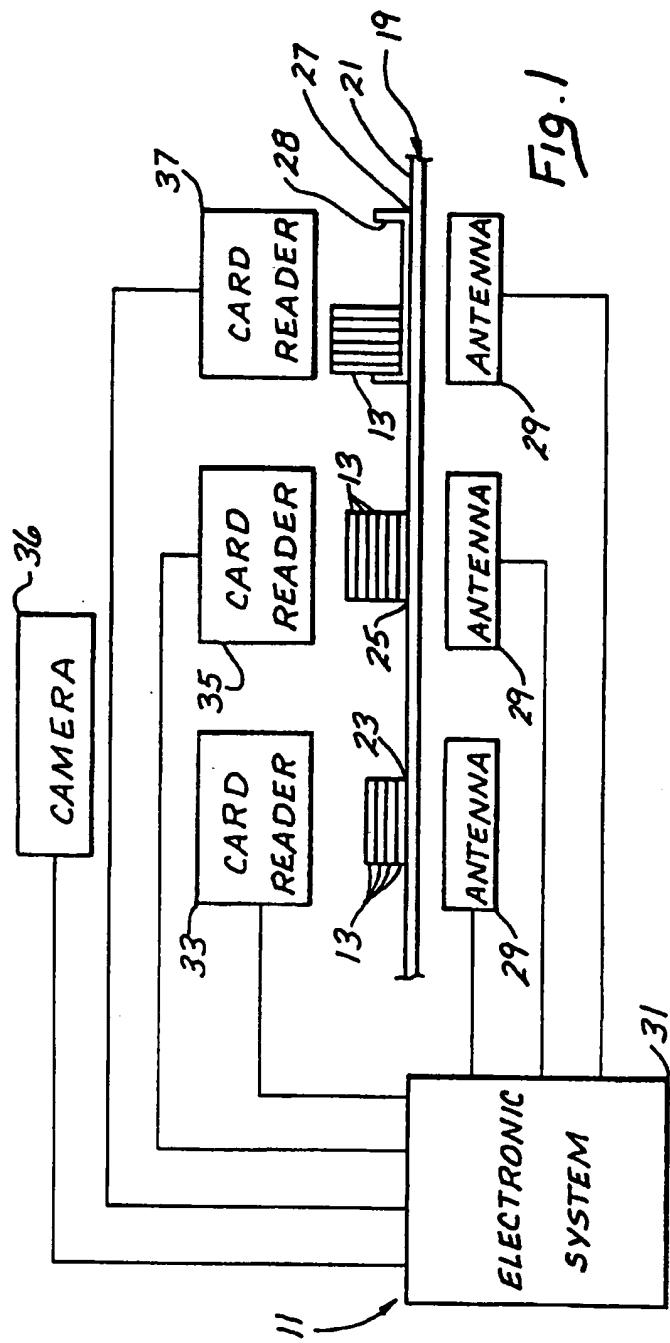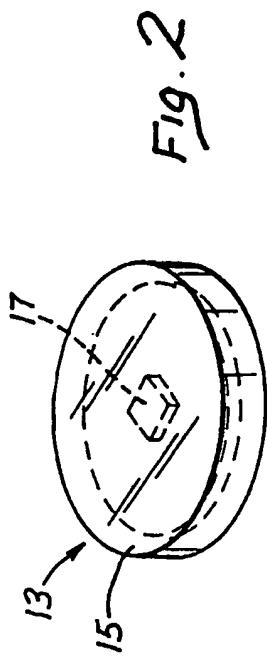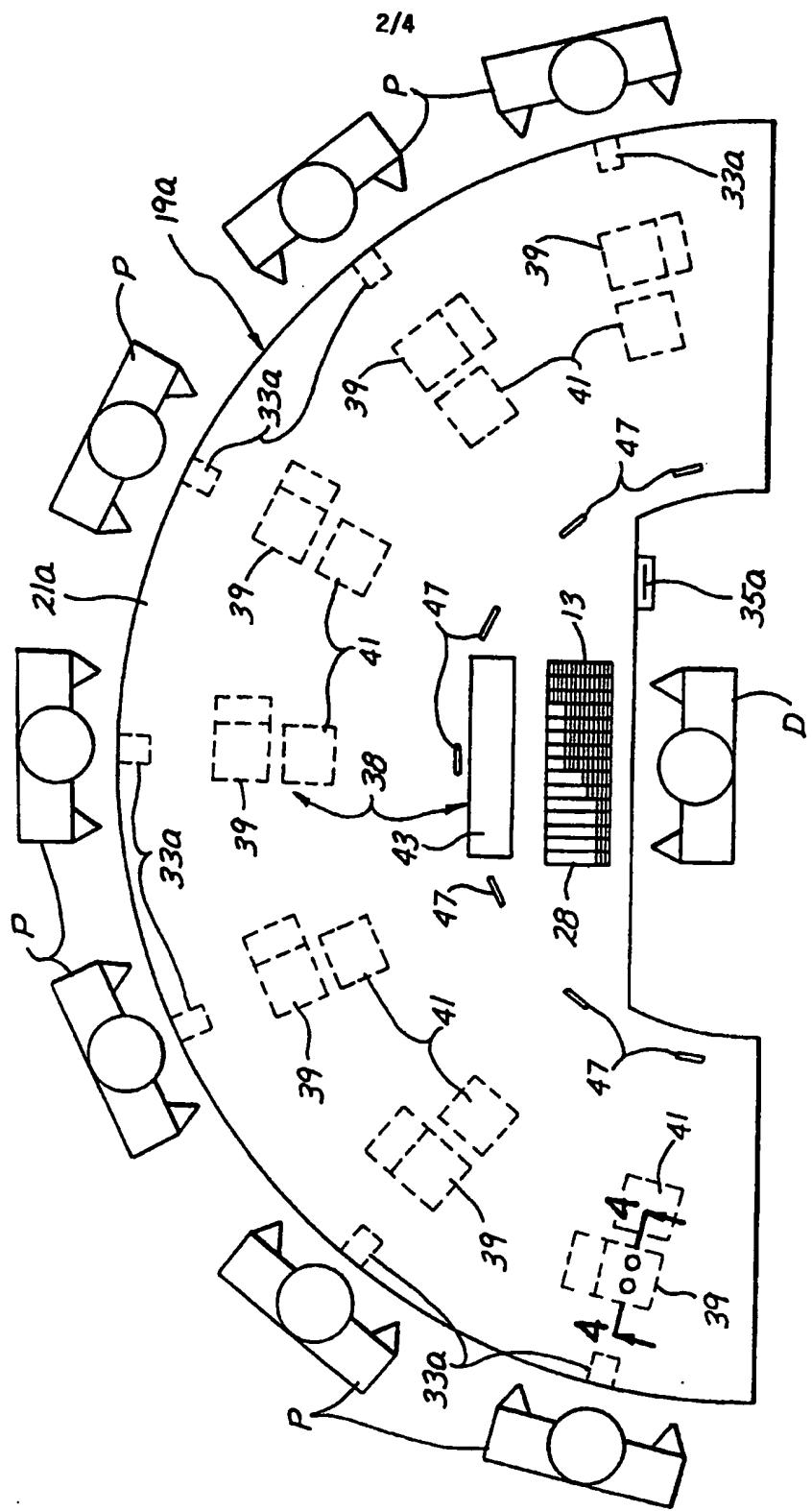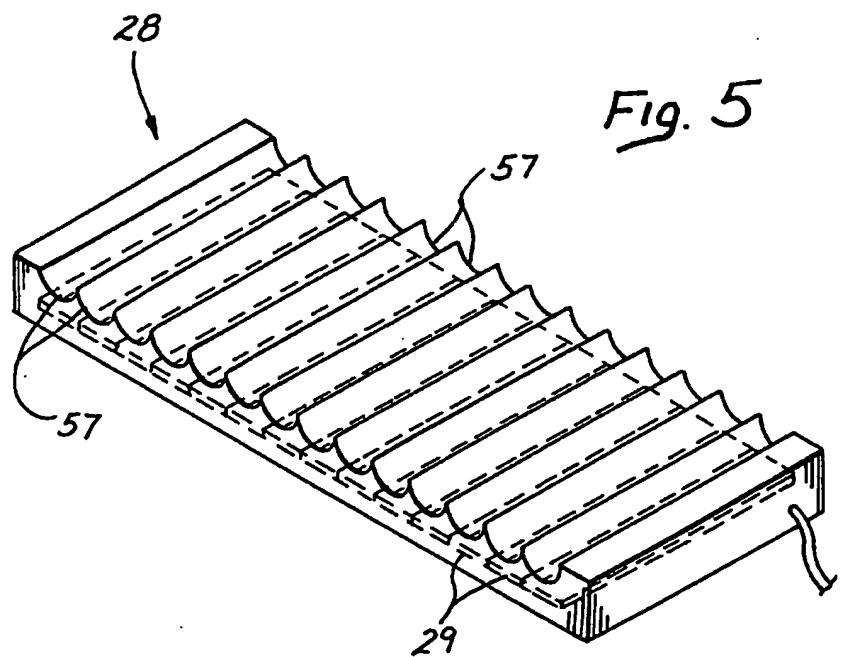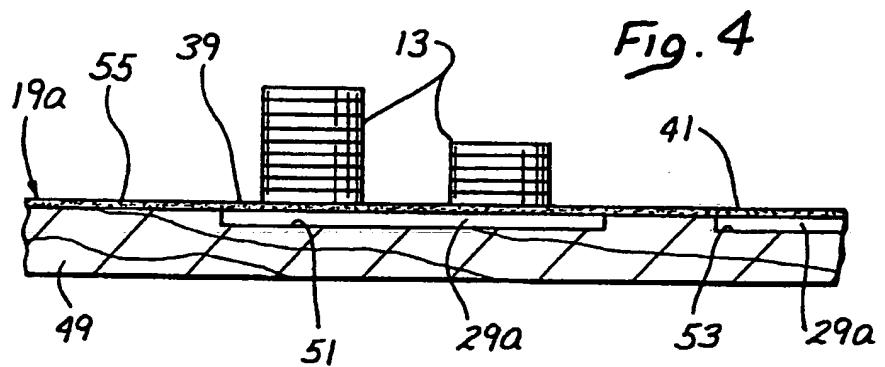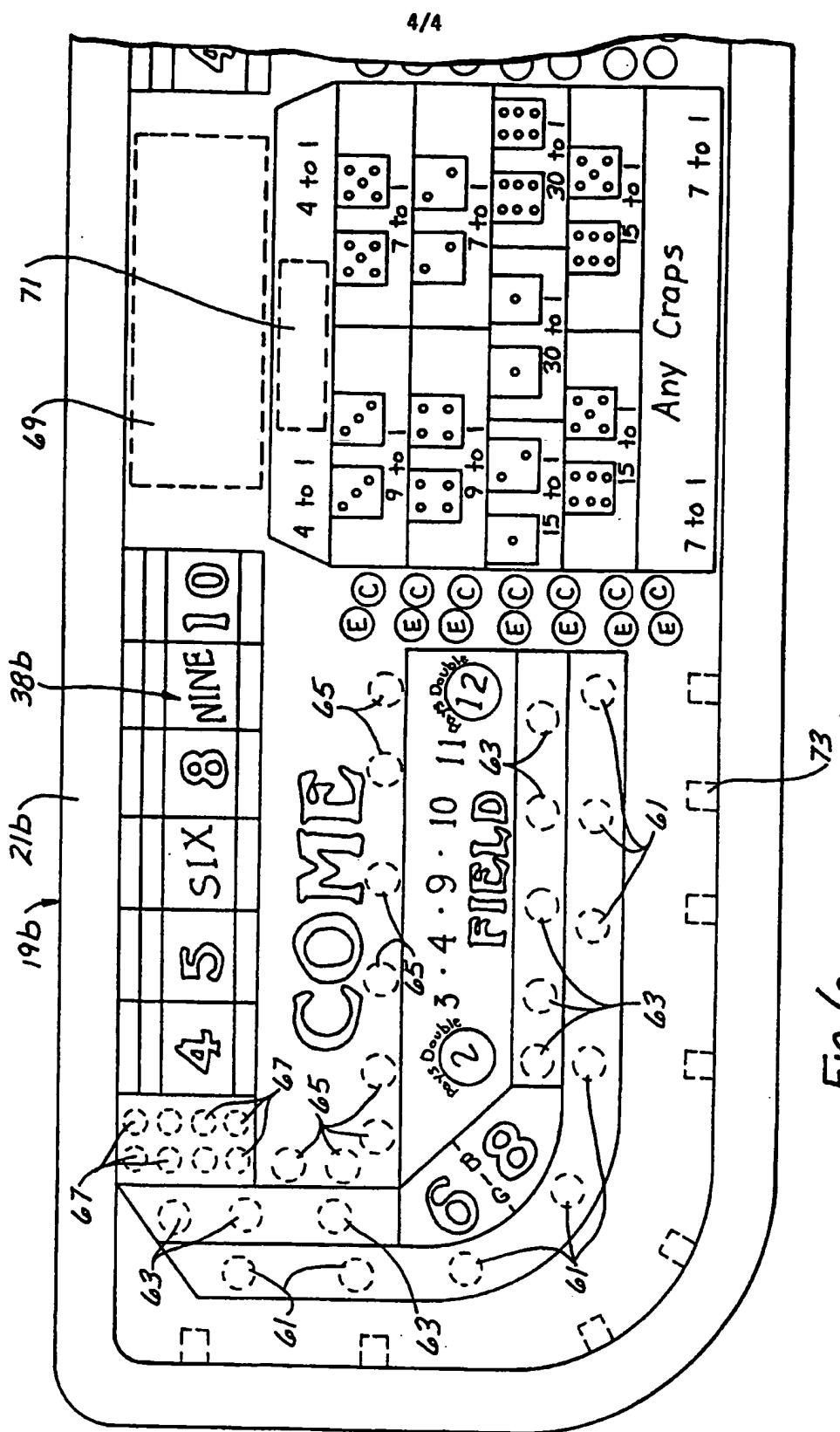
Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

INTERNATIONAL SEARCH REPORT

A.   CLASSIFICATION OF SUBJECT MATTER

IPC(6)   :A47B 25/00; A63F 9/24; G09F 3/02

US CL   :40/27.5; 194/214; 273/237, 238, 288, 309; 364/112; 463/25, 29

According to International Patent Classification (IPC) or to both national classification and IPC

B.   FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. :   273/309, 288, 237, 238; 463/25,29; 364/412; 194/214; 40/27.5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C.   DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US, A, 4,755,941 (BACCHI) 05 July 1988, see entire patent.	12-16, 18, 22
A	US, A, 5,361,885 (MODLER) 08 November 1994, see entire patent	NONE

☐ Further documents are listed in the continuation of Box C.   ☐ See patent family annex.
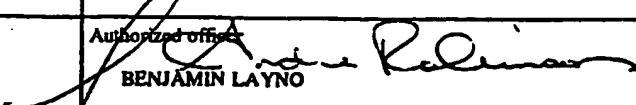
Date of the actual completion of the international search	Date of mailing of the international search report
18 JUNE 1996	11 JUL 1996
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer BENJAMIN LAYNO
Facsimile No. (703) 305-3590	Telephone No. (703) 308-1815